

ENVIRONMENTAL ASSESSMENT

for the

PEAVINE PROJECT

OR-110-01-22

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT
GRANTS PASS RESOURCE AREA

May 2001

Dear Reader:

We appreciate your interest in the BLM's public land management activities. We also appreciate your taking the time to review this environmental assessment (EA). If you would like to provide us with written comments regarding this project or EA, please send them to me at 3040 Biddle Road, Medford, OR 97504. If you would prefer, you may also email comments to me at: *or110mb@.or.blm.gov*. Comments that clearly articulate site specific issues or concerns are most useful to us. As we make our decisions regarding the project, we will consider all pertinent site specific comments.

If confidentiality is of concern to you, please be aware that comments, including names and addresses of respondents, will be available for public review or may be held in a file available for public inspection and review. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this clearly at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or officials of organizations or businesses will be made available for public inspection in their entirety.

Abbie Jossie
Field Office Manager
Grants Pass Resource Area

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT

EA COVER SHEET

RESOURCE AREA: Grants Pass

FY & REPORT # EA Number OR-110-01-22

ACTION/TITLE: **PEAVINE PROJECT**

LOCATION: Sections 27 & 34 T34S R8W, Willamette Meridian

FOR FURTHER INFORMATION CONTACT: Abbie Jossie
Medford District Office, BLM
3040 Biddle Road
Medford, Oregon 97504
(541) 618-2303

INTERDISCIPLINARY PREPARERS	TITLE	RESOURCE VALUES ASSIGNED
Tara Lowrance-Mattis*	Forestry Technician	Team Leader, EA Writer/Editor, Timber and Silviculture
Kip Wright*	Wildlife Biologist	Prime or Unique Lands, Wildlife, Grazing, and Fisheries
Clif Powers *	Forestry Technician	Silviculture
Denise Jacobs *	Hydrology Technician	Hydrology, Soils
Tom Dierkes*	Forester	Vegetation, Silviculture
Matt Craddock	Realty Specialist	Minerals, Lands, and Cultural
Dave Maurer	Soil Scientist	Floodplains, Wetlands, Soils, and Water
Dale Johnson	Fisheries Biologist	Fisheries
Jeanne Klein	Recreation Planner	Recreation, VRM
Jim Roper	Engineer	Roads, Quarries, Road Agreements, Easements
Linda Mazzu	Botanist	T&E Plants
Brad Washa	Fuels Specialist	Fire, Slash Treatment
Bob Murray	Forester	Logging Systems

* Project Planning Core Team Member

GRANTS PASS RESOURCE AREA
ENVIRONMENTAL ASSESSMENT
PEAVINE PROJECT

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Chapter 1

Purpose of and Need for Action

A. Introduction

The purpose of this environmental assessment (EA) is to assist in the decision making process by assessing the environmental and human affects that could result from implementing the proposed project and/or alternatives. The EA will also assist in determining if an environmental impact statement (EIS) needs to be prepared or if a finding of no significant impact (FONSI) is appropriate.

This EA tiers to the following documents:

- (1) Final EIS and Record of Decision dated June 1995 for the Medford District Resource Management Plan (October 1994) (RMP-ROD, or RMP);
- (2) Final Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl (February 1994);
- (3) Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and, Attachment A entitled the Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (April 13, 1994) (NFP-ROD, or NFP);
- (4) Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (January 2001)

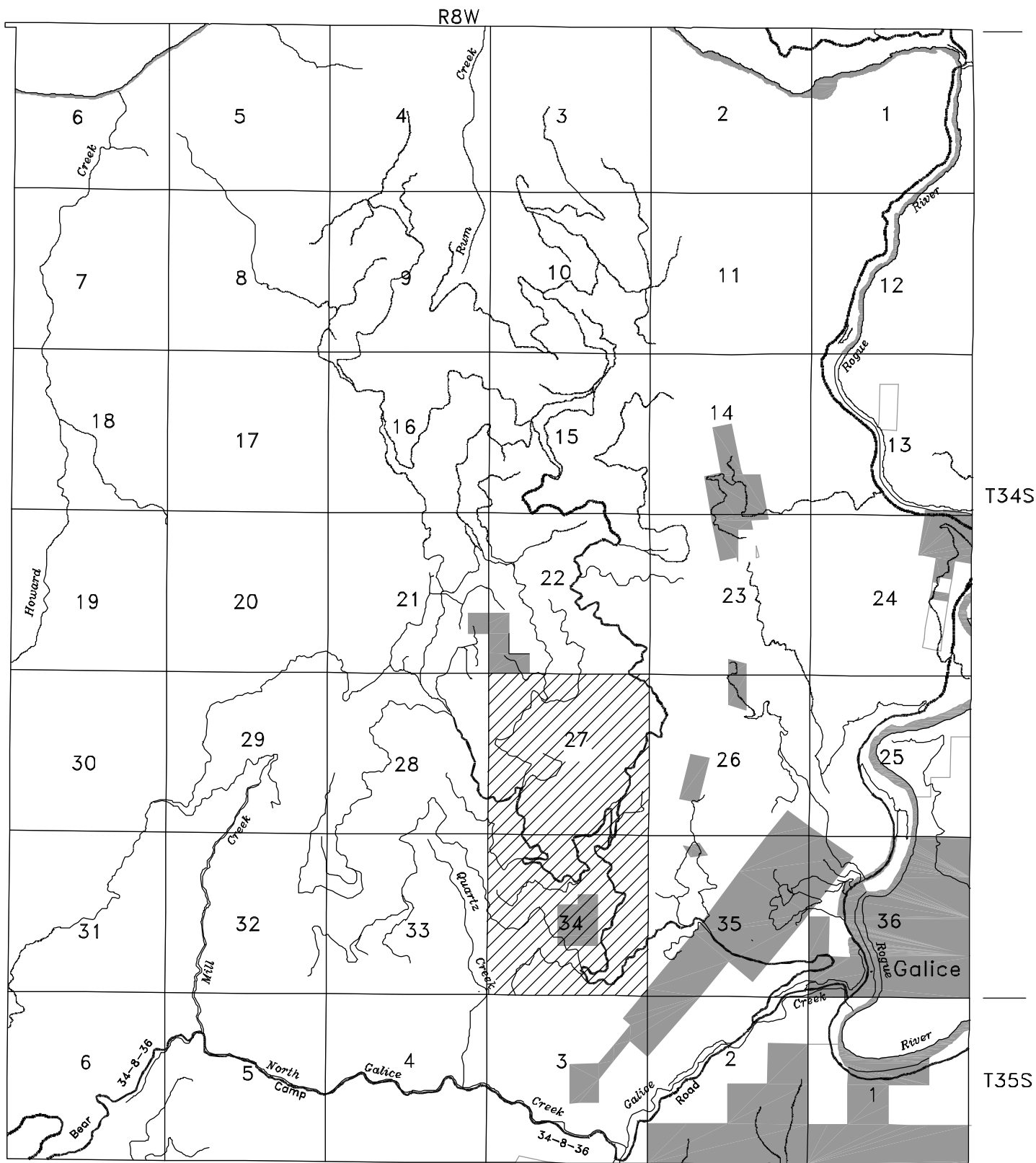
In addition the project draws on the information and recommendations found in the Southwest Oregon Late-Successional Reserve Assessment dated October 1995 (LSRA).

B. Purpose and Need for the Proposal

The purpose of the proposed action is to implement the Medford District's Resource Management Plan (RMP) and to implement treatment and management strategies and recommendations for the Fish Hook/Galice Late Successional Reserve (LSR) outlined in the Southwest Oregon Late-Successional Reserve Assessment and the Rogue-Recreation Section watershed analysis. During project planning, assessments of site specific conditions are made and evaluated in terms of the broader objectives. These in turn define the purpose and need for individual treatment proposals, which are noted in the objectives for proposals in Chapter 2 and the affected environment discussions in Chapter 3.

C. Project Location

The general location of the proposed project is shown on Map 1.



Peavine Project Location Map BLM Medford District - Grants Pass Resource Area

0 1/2 1
Scale in miles

Map 1

- Legend
- Streams
 - Minor roads
 - Major roads
 - Private/Other lands
 - BLM lands
 - Project area

Chapter 2

Proposed Action and Alternatives

This chapter describes the issues and objectives that underpin the proposed action/alternatives. It also describes the proposed action/alternatives that will be addressed or analyzed in this EA.

A. Issues Relevant to the Project Area and Proposal

A variety of issues and concerns were raised during the initial scoping of this project. These were raised by interested individuals or groups as well as by the planning team and ID team. The issues raised are listed below. Many of these issues were used in the design of the proposed project and alternatives. In some cases an issue was considered at the onset by the planning team but then eliminated from further consideration because it was outside the scope of the project or proposed action. These are summarized in Appendix A.

1. Many stands in the project area are 35 - 50 year old high-density plantations, some of which include off-site ponderosa pine.
2. Due to past practices, the existing coarse woody and snag components are below levels that would be expected in comparably aged natural stands.
3. Coarse wood recruitment in riparian reserves is low due to the young stand ages in the reserves and past logging practices.
4. The existing road system has some unstable areas which are eroding and contributing sediment to the streams.
5. The project area is transected by the Old Channel mining ditch. Where the ditch crosses some Class 4 stream channels, it diverts water out of the stream bed discharges it from places where the ditch is breached. This creates side hill erosion.
6. There are some historical and cultural features which may require protection.
7. The project is within the Fish Hook / Galice Late-Successional Reserve. It is also within an RMP designated Big Game Management Emphasis Area (deer and elk).
8. Port-Orford cedar is present in the project area, as well as along the road systems leading to it.

B. Proposed Action and Alternatives

1. Introduction

A host of alternatives to the proposed action or parts of the proposed action were considered during the planning phase of this project. Generally these potential alternatives were resolved during the planning and disappeared as the final proposal emerged. Some of the alternatives that were considered but eliminated from further evaluation are summarized in Appendix A. Those alternatives

carried forward are described in this section. This section also outlines the objectives / need that the proposed action/alternatives are designed to achieve.

2. Alternative 1: No Action

The "no-action" alternative is defined as not implementing any aspect of the proposed action alternative. The no action alternative also serves as a baseline or reference point for evaluating the environmental effects of the action alternatives. Inclusion of this alternative is done without regard to whether or not a no action alternative is consistent with the Medford District RMP.

The no action alternative is not a "static" alternative. Implicit is the continuation of the current trends in the project area. This includes trends such as vegetation succession with consequent wildlife habitat changes, deterioration of road conditions, current rates of erosion, continuation of current road densities, continuation of the normal BLM road maintenance schedules, trends in fire hazard changes, off-highway vehicle use, *etc.*

3. Alternative 2: Proposed Action

The proposed action focuses on young plantation thinning in a portion of the Fish Hook/Galice LSR.

a. Objectives of the Proposed Action

1. Land Allocation Objectives

The project area is within the Late-Successional Reserve Allocation. Specific land allocation level objectives are enumerated in the RMP-ROD (pp. 38-39) and the Desired Conditions discussion of the LSRA (pp. 127-150).

2. Project Area Objectives

The broad goal of the project is to accelerate the development of late-successional forest conditions by reducing stocking levels within young plantations, ensuring continued species diversity, and accelerating the development of late-successional forest characteristics while reducing the potential for large-scale fires or outbreaks of insects / disease. This goal stems from the NFP-ROD's Standards and Guidelines' encouragement to use "silvicultural practices to accelerate the development of overstocked young plantations into stands with late-successional and old-growth characteristics, and to reduce the risk to Late-Successional Reserves (LSRs) from severe impacts resulting from large-scale disturbances and unacceptable loss of habitat" (NFP, p. B-1). Recent studies of forest stand structural development in western and southern Oregon have demonstrated that the structural development of overstocked young plantations are more likely to achieve old-growth attributes if thinned prior to eighty years of age, whereas unthinned areas of this type are *unlikely* to develop on a structural trajectory like the old-growth stands the LSRs are designed to enhance and preserve.¹

¹ Effects of Thinning on Structural Development in 40- to 100-year-old Douglas-fir Stands in Western Oregon. Bailey, Tappeiner O.S.U. Paper 3207, p. 24.

Based on the project planning team's evaluation of the issues listed in Section A above, the following unique project specific objectives were used in designing this alternative:

- 1) In the current densely stocked stands, reduce density to a point that will provide for: canopy gaps and layers to develop, understory trees to establish, trees to grow larger, and maintain the vigor and quality of forage vegetation and low shrubs.
- 2) Remove off-site ponderosa pine, replant areas if needed. Off-site pines greater than 20" DBH would be retained as a future snag and coarse woody debris (CWD) recruitment pool.
- 3) Use brushing and fire to control tanoak, huckleberry oak, liveoak and evergreen huckleberry.
- 4) Reduce the long-term potential adverse impacts on the aquatic systems from sedimentation by closing unnecessary roads, ripping and planting denuded areas, repairing the slide area(s) below the road in section 34 of project area, maintaining and/or installing ditches and waterbars, and keeping road surfaces in good condition. Restore natural hydrological function currently interrupted by the ditch in section 34.
- 5) Improve big game habitat by thinning overstocked young plantations, decommissioning skid trails and spur roads, and planting with native forage species.
- 6) Manage for habitat of Northern Spotted Owl's prey-base species by (a) designing diversity cells in areas of high concentration of woodrat nests and (b) promoting mature forest characteristics where they currently do not exist to create habitat for species such as the Flying Squirrel and Red tree vole.
- 7) Reduce the risk of stand replacing disturbances and habitat loss through fuels reduction and density management of young forest stands.
- 8) Expand the long term recruitment pool of large soft snags and large down wood by thinning overstocked young stands to enhance growth in individual trees, by retaining all large diameter legacy trees, all existing snags, and all pieces of large down wood.
- 9) Treat stands to redirect their successional and developmental trajectories in a manner that will maintain spatial diversity (age classes and vegetation types) and that will accelerate the creation of more complex structural diversity.

b. Description of the Proposed Action

The proposed action is summarized in Table 1. See also Map 2 which shows certain site features and also some aspects of the proposed action.

1) Density reduction in plantations

Background: All units proposed for treatment are young, even-aged plantations 35 - 50 years of age on former clearcuts. Individual tree vigor is declining due to stand density related competition.

There is very little development of different canopy layers occurring within them. Many of these plantations have a few residual large tree and patches showing late-successional characteristics. Invasive brush and hardwood species such as Tanoak, Huckleberry Oak, Canyon Liveoak and Evergreen Huckleberry are becoming inhibitors to the development of a conifer understory.

Proposed Action: The proposed thinning and brushing will release the residual conifers. Thinning is based on the crown sizes of the trees. Crown-size based thinning does not use a uniform grid-type spacing of only the healthiest trees to achieve the density management thin. Rather, it allows for the natural variations in tree sizes, vigor, and development across the site to determine the spacing result. Diversity patches will be created by having one ¼ acre no-treatment areas per 5 acres, and by creating one ¼ acre clearing per 5 acres. In total, there would be approximately 90 no treatment diversity patches and a comparable number of small clearings in the treatment units (approximately 5% of the treatment area). Species will be selected for retention to favor those naturally found in each unit's dominant plant association.

2) Large Trees, Snags and CWD

All trees greater than 20"DBH and all snags would be reserved from cutting and removal, except in instances where safety concerns prevail. Slash treatments and underburning would emphasize protection of snags, residual larger trees, and coarse woody debris. It is anticipated that 5 years after treatment there would be at least 4 snags per acre. If, at that time, the snag level is low, trees 14+"DBH could be girdled to provide hard snags and future CWD to average 4 per acre over 40 acres, where tree sizes allows.

3) Mining Ditches

The existing structure and integrity of the ditch would be maintained to the greatest extent possible while protecting its cultural and historical value. The ditch berm would be used as the trail path. Only in the draws where the berm is creating problems (*e.g.*, existing collapsed berm (blowouts), potential blowouts, and water pooling or stream diversion by the ditch) would the berm be removed. This would allow the drainage flow to return to its natural course. Motorized use would be prohibited

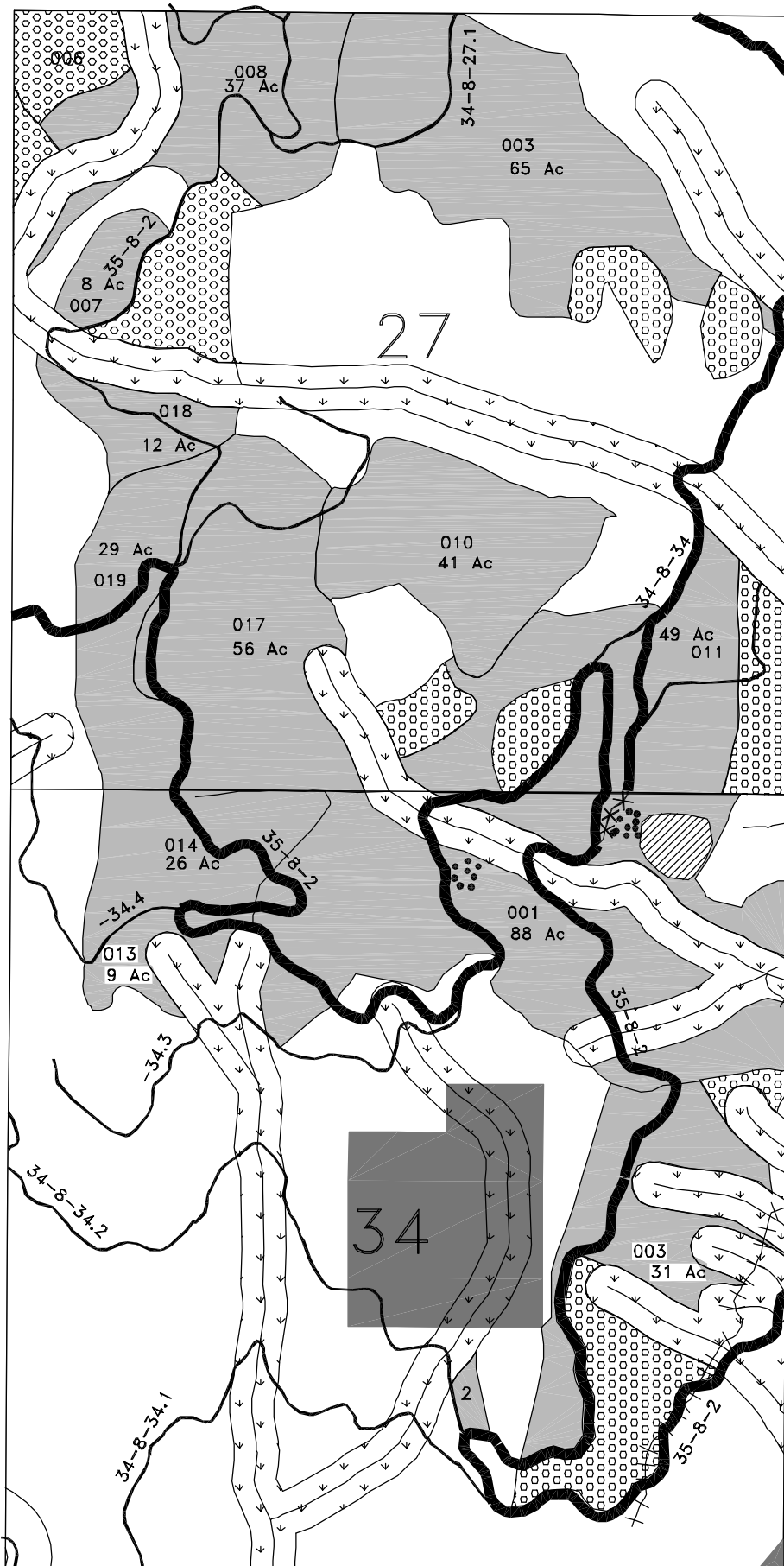
Map 2

Peavine Project

Alternative 2

Proposed Action

T34S R8W Sections 27 & 34



- Legend**
- *** Decommission old road bed
 - ▬ Roads
 - Streams
 - ++ Mining ditch
 - Private land
 - 003 Treatment units — O.I. number and acreage
 - No treatment riparian areas Stream class III & IV
 - ▨ Wallow restoration area
 - ⊙ No thinning treatment area: legacy trees or special consideration
 - Slide stabilization area

0 1000 2000
Feet



PEAVINE PROJECT

Table 1: Summary Description of Alternative 2

Key # O.I. Unit#	Total Unit Acres	Current Seral Stage	TPCC	Aspect / Elevation	Plant Association	*Soil Type	Treat- ment Acres	Proposed action by Tree DBH		Yarding System ** (Approx. acreage)			Slash Treatment -- Understory Treatment	Commercial Thin Volume MBF (est)			Re- forest- ation Needs	Comments
								0 - 7.5"	7.5 - 20"	Up to 35% slope	35-70% slope	> 70% slope		Acres	Harvest Vol / Ac	Harvest Total Vol.		
PLANTATION THINNING																		
T34S, R8W, Section 27																		
110655 003	70	Mid	FNR/RTR RMR RTR	East 2500'-3300'	LIDE3- ARCTO3- XETE	Vermisa- Beekman, Speaker- Josephine	65	PCT1	CT2 ≤16" DBH	T 52 ac	Cable 13 ac	None	SLD, SBS, HP	65	3	195	No	Patchy stand, portions need PCT & CT, parts left alone. Planted 1956
110658 006	16	Mid	RMR / RTR	East 3500'	LIDE3- ARCTO3- XETE	Vermisa- Beekman	0	None	None	None	None	None	None	0	0	0	No	Scattered overstory, logged/burned
110659 007	32	Early	FNNW	Southeast 2900'-3400'	LIDE3- ARCTO3- XETE	Vermisa- Beekman	8	PCT1	None	None	None	None	SLD, SBS, HP	0	0	0	No	Primarily PCT, poles. Planted 1963
110664 008	53	Mid	FNR/RTR FNNW RTR	Southeast 3300'	LIDE3- ARCTO3- XETE	Vermisa- Beekman, Speaker- Josephine	37	PCT1	CT1	T 37 ac	Cable 0 ac	None	SLD, SBS, HP/UB	37	2	74	No	Planted 1956 Del Norte Salamanders present
110662 010	41	Mid	RMR / RTR	East 2600'-3000'	LIDE3- PSME- QUCH/ RHD16	Speaker- Josephine, Pollard, Vermisa- Beekman	41	PCT2	CT2	T 41 ac	Cable 0 ac	None	SLD, SBS, HP	41	3	123	No	Planted 1956
110663 011	76	Mid	RMR / RTR	East 2100'-2600'	LIDE3- PSME- QUCH/ RHD16	Speaker- Josephine, Pollard	49	PCT2	CT2	T 49 ac	Cable 0 ac	None	SLD, SBS, HP	49	3	147	No	Planted 1956. Del Norte Salamanders present
116448 017	63	Mid	RMR / RTR	East 2600'-3000'	LIDE3- PSME- QUCH/ RHD16	Speaker- Josephine, Josephine	48	PCT2	CT2	T 48 ac	Cable 0 ac	None	SLD, SBS, HP	48	3	144	No	Planted 1960
116449 018	17	Mid	RMR	Northeast 2900'-3300'	LIDE3- PSME- QUCH/ RHD16	Vermisa- Beekman, Speaker- Josephine	12	PCT2	CT2	T 0ac	Cable 12ac	None	SBS, SLD, HP	12	3	36	No	Planted 1960 Del Norte Salamanders present
16450 019	29	Mid	RMR / RTR	Northeast 3100'	LIDE3- ARCTO3- XETE	Vermisa- Beekman, Speaker- Josephine, Josephine	29	PCT1	CT1	T 15 ac	Cable 14 ac	None	SLD, SBS, HP	29	2	58	No	Planted 1960

PEAVINE PROJECT

Table 1: Summary Description of Alternative 2

Key # O.I. Unit#	Total Unit Acres	Current Seral Stage	TPCC	Aspect / Elevation	Plant Association	*Soil Type	Treatment Acres	Proposed action by Tree DBH		Yarding System ** (Approx. acreage)			Slash Treatment -- Understory Treatment	Commercial Thin Volume MBF (est)			Re-forest-ation Needs	Comments
								0 - 7.5"	7.5 - 20"	Up to 35% slope	35-70% slope	> 70% slope			Harvest Vol / Ac	Harvest Total Vol.		
T34S, R8W, Section 34																		
110724 001	122	Early/Mid	RTR / RMR	East 1900'-2400'	LIDE3-PSME-QUCH2/RHDI6	Josephine, Speaker-Josephine, Pollard	88	PCT2	CT2	T 64 ac	Cable 24 ac	None	SLD,SBS, HP/UB	88	2.5	220	No	Primarily CT Remove offsite PP in meadow/wallow Planted 1957
112905 003	82	Mid	RTR	East 1700'-2100'	LIDE3-PSME-QUCH2/RHDI6	Speaker-Josephine	40	PCT2	CT2	T 40 ac	Cable 0 ac	None	SLD,SBS, HP	40	3	120	No	Once a shelterwood. Planted 1965
116416 013	15	Mid	RTR	Southeast 2600'	LIDE3-ARCTO3-XETE	Speaker-Josephine	13	PCT1	CT1	T 4 ac	Cable 9 ac	None	SLD, SLB, HP/UB	13	2	26	No	Mostly Jeffrey pine. Planted 1957
116417 014	26	Early/Mid	RTR / RMR	Southeast 2900'	LIDE3-ARCTO3-XETE	Speaker-Josephine, Josephine	26	PCT1	CT1	T 26 ac	Cable 0 ac	None	SLD, SLB, HP/UB	26	2.5	65	No	Some serpentine soils. Planted 1957
TOTALS -		Project Area Acres: 642			Vegetation Treatments-		456	456	448	376	72	0		448	2.7	1,208		

Footnotes:

1) Vegetation Treatments.:

PCT1 - *Precommercially thin conifers to a 2x crown radius spacing, with leave tree species preference order of JP, SP, DF, IC, TF, PP, tanoak, liveoak, chinkapin, huckleberry oak.*

PCT2 - *Precommercially thin conifers to a 1½x crown radius spacing, with a leave tree species preference order of SP, DF, JP, IC, TF, PP, liveoak, tanoak, chinkapin.*

CT1 - *Commercial thin to a 2x crown radius spacing, with a leave tree species preference of JP, SP, DF, IC, TF, PP, tanoak, liveoak, chinkapin, huckleberry oak.*

CT2 - *commercial thin to a 1½ x crown radius spacing, with a leave tree species preference of SP, DF, JP, IC, TF, PP, liveoak, tanoak, chinkapin. SBS - Slash brush species: Cut shrubs away from leave trees for a radius of 15'-25', except for reserved species and berry-producing whiteleaf and greenleaf manzanita with crowns greater than 6' diameter.*

Along all roads throughout the project area, prune all leave trees to ½ height of tree or up to 12', to a slope distance of 25' uphill and 50' downhill from the road edge.

For all treatments - All maple species, dogwood, pacific yew, black oak, Port-Orford cedar, alder, Vaccinium ssp (except evergreen), willows, and serviceberry will be reserved, regardless of spacing (i.e, not included in spacing or considered leave trees). Trees with largest and best-formed crowns to be selected as leave trees regardless of defect or disease; the largest crown determines spacing. Spacing variance on crown-based spacing is plus or minus 25%.

2) Slash / Fuels treatment: SLD - *Slash sprung and damaged conifers and hardwoods (except reserved species) 1"-6" DBH;* HP - *Hand pile slash 1"-6" x 2', cover, and burn piles;* UB - *Underburn, mosaic or spot broadcast burn under reserved overstory.*

3) Yarding systems: T - *Tractor;* C - *Cable;* HE - *Helicopter.* ** Helicopter yarding is an acceptable alternative to tractor or cable yarding in all units.

4) TPCC (*Timber Productivity Capability Classification*): RTR - *regeneration restricted due to hot temperatures and low soil moisture;* RMR - *regeneration restricted due to low soil moisture;* FNR - *nutrient restricted due to soil type;* FNNW - *withdrawn due to soil-based nutrient deficiency.*

5) Stand Seral Stage:

Early - *Vegetation is dominated by shrubs or conifers and hardwood trees in a seedling/ sapling size class (<5"DBH)*

Mid - *Vegetation is tree dominated. Trees at least small pole size (>4"DBH). Larger scattered trees may be present.*

6) Plant Associations per Field Guide to Forested Plant Associations of Southwestern Oregon, (USDA Forest Service, 1996):

LIDE3-ARCTO3-XETE - *Tanoak-Manzanita-Beargrass;* LIDE3-PSME-QUCH/RHD16 - *Tanoak-Douglas-fir-Canyon Liveoak/Poison Oak*

7) Harvest acres vs. Treatment acres: The difference in these approximate acreages is attributable to variability within the unit, unit inclusions of riparian reserves, no treatment areas of legacy trees or special consideration, etc.

8) Conifer leave tree species: *SP - sugar pine, JP - Jeffrey pine, DF - Douglas-fir, IC - incense-cedar, TF - true fir (Abies) of any species, PP - ponderosa pine*

4) Big Game Forage and Cover

The following big game palatable forage hardwood tree and shrub species would be protected from cutting throughout the project area: willows of all species, maples of all species, dogwood, alder, elderberry, huckleberry species (except evergreen), black oak. All residual patches of late-successional forest seral areas and riparian areas will be reserved from treatment to retain hiding cover. The untreated diversity patches would also contribute to this. Ripped skid trails and old spur roads will be planted with grasses and native shrubs of good forage value.

5) Spotted Owl Prey-base Food Plants and Cover

Selective retention of nut- and berry-producing trees and shrubs is proposed to encourage and preserve the food species plants utilized by species such as the woodrat, flying squirrel, and other small mammals. All Black oak, huckleberry (except evergreen), elderberry, serviceberry, and large berry-producing larger manzanita would be reserved from cutting. All residual patches of late-successional forest seral stage and riparian areas are reserved from any treatment, as well as at least 5% of the treatment area (diversity patches), thereby providing cover and leaving food species plants available. Generally, low woody and herbaceous vegetation would not be treated. The thinning, with patch cuts over approximately 5% of the area (diversity patches), will allow these vegetative types to grow and spread instead of being choked out by dense conifer and brush cover. Slash and fuel management prescriptions will emphasize hand piling. Some areas will receive cool underburning.

6) Wallow Restoration

In unit # 003, section 34, there is a natural game wallow area which is being encroached on by natural and planted conifers. Wet season ponding occurs to some extent. Maintenance / restoration of the wallow would be done in a two acre area (approximately) around this wallow. All planted pine would be removed and the site would be underburned to reduce brush and small conifers. The largest open-grown Douglas-fir would be retained.

7) Roads - Use, Improvement, Decommissioning, Closures

Table 2 lists the roads proposed for use, improvement, renovation, and/or closure. Table 2 and Map 3 also note the existing skid and spur roads that are proposed to be decommissioned.

Road improvement would be done to the minimum standard appropriate to the intended long term use of the road. Proposed road closures and decommissioning are intended to reduce the potential for erosion and to reduce the impacts on wildlife. Roads proposed for decommissioning that are needed to support the prescribed burning / fuel reductions would have the decommissioning scheduled for after burning is complete.

Vegetation along the roadsides would be thinned and pruned as needed to increase driver visibility and road user safety.

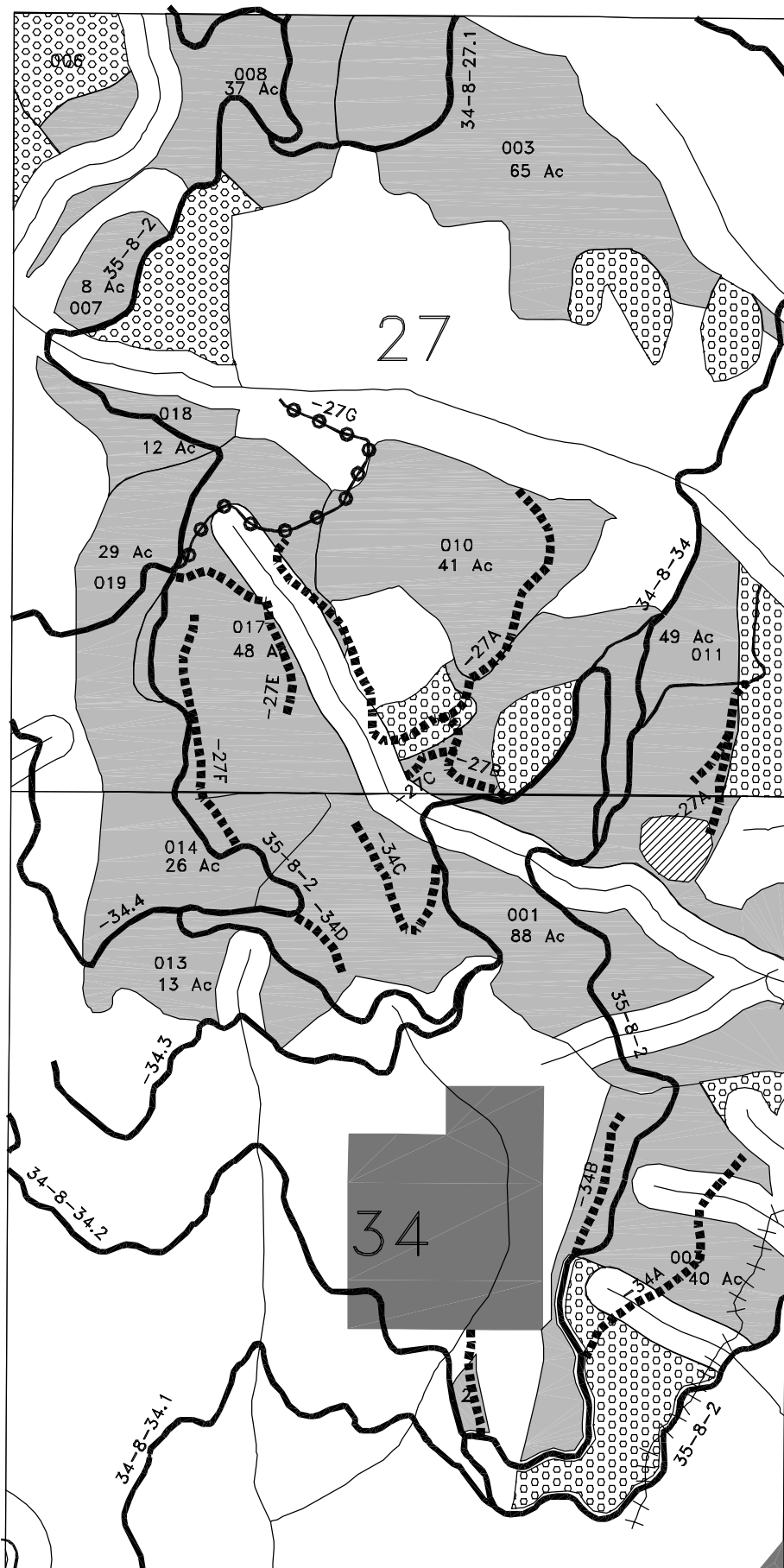
Table 2: Proposed Use, Renovation, Improvement, Maintenance and Closures of Roads					
Road Number / Road Segment	Road Control	Length (miles)	Current Condition / Surface type	Proposed Use, Maintenance, Construction, Renovation or Improvement	Comments, Proposed Closures and Decommissioning
35-8-2A1	BLM	1.63	BST	Road maintenance	MO656 Agreement. Use proposed thinning, brushing, and pruning to increase visibility and safety
35-8-2A2	BLM	1.27	BST	Road maintenance	Use proposed thinning, brushing, and pruning to increase visibility and safety
35-8-2B	BLM	1.20	BST	Road maintenance, Improvement to reconstructed road. Install 18" CMP, chip seal 750 ft x 20 ft.	Use proposed thinning, brushing, and pruning to increase visibility and safety
35-8-2C	BLM	2.40	BST	Road maintenance, Improvement	Use proposed thinning, brushing, and pruning to increase visibility and safety
35-8-2D	BLM	1.10	NAT	Road maintenance, Improvement	Use proposed thinning, brushing, and pruning to increase visibility and safety
34-8-27A	BLM	0.40	BST	Road maintenance	Use proposed thinning, brushing, and pruning to increase visibility and safety
34-8-34A	BLM	1.40	ASC	Road maintenance	Use proposed thinning, brushing, and pruning to increase visibility and safety
34-8-34.2	BLM	0.20	PRR	Road maintenance	Use proposed thinning, brushing, and pruning to increase visibility and safety
34-8-34.3	BLM	0.50	PRR	Road maintenance	Use proposed thinning, brushing, and pruning to increase visibility and safety
34-8-34.4	BLM	0.30	PRR	Road maintenance	Use proposed thinning, brushing, and pruning to increase visibility and safety
34-8-22	BLM	0.30	NAT	Road maintenance	Use proposed thinning, brushing, and pruning to increase visibility and safety
34A Skid rd	BLM	0.35	NAT	Renovation	Fully Decommission following project use
34B Skid rd	BLM	0.20	NAT	Renovation	Fully Decommission following project use
34C Skid rd	BLM	0.40	NAT	Renovation	Fully Decommission following project use
34D Skid rd	BLM	0.15	NAT	Renovation	Fully Decommission following project use.
27A Skid rd	BLM	0.35	NAT	Renovation	Fully Decommission following project use.
27B Skid rd	BLM	0.70	NAT	Renovation	Fully Decommission following project use.
27C Skid rd	BLM	0.12	NAT	Renovation	Fully Decommission following project use.
27D Skid rd	BLM	0.40	NAT	Renovation	Fully Decommission following project use.
27E Skid rd	BLM	0.35	NAT	Renovation	Fully Decommission following project use.
27F Skid rd	BLM	0.40	NAT	Renovation	Fully Decommission following project use.
27G Spur rd	BLM	0.45	NAT	Renovation	Fully Decommission following project use.
Section 34 SW1/4SE1/4 skid road	BLM	0.20	NAT	Renovation to correct drainage problems.	Fully Decommission following project use.
Total		14.77			
Maintenance, renovation and decommissioning are described as follows:					
<p>Maintenance may include surface blading, roadside brushing for safety, spot rocking and maintaining existing drainage structures. Maintenance of natural surface roads may also include correcting drainage and erosion problems (<i>e.g.</i>, improving or installing drainage dips, installing other drainage structures where needed, eliminating outside road edge berms or other features that are obstructing drainage where they exist).</p> <p>Renovation consists of reconditioning and preparing the subgrade for equipment or heavy truck use, cleaning and shaping road prism and structures, and trimming or removing vegetation from cut and embankment slopes.</p> <p>Full Decommissioning consists of ripping of the roadbed to promote the establishment of vegetation and promote drainage consistent with the surrounding undisturbed areas. Existing culverts will be removed. Grass seeding of the road prism, fill slope and cutbank, and mulching of the road prism will be included to minimize initial erosion potential. An earth berm barricade will be constructed (where applicable) at the beginning of each road to prevent use of the road prism following decommissioning. Native grasses would be used for road and landing seeding when available.</p> <p>Improvement consists of upgrading road drainage structures, rocking road surface, or other changes in the road prism that would correct environmental problems.</p>					

Map 3

Map 3 Peavine Project

Skid roads to be decommissioned

Appendix E
T34S R8W Sections 27 & 34



Legend

- Roads
- Streams
- Mining ditch
- Private land
- Treatment units – O.I. number and acreage
- Spur road to be decommissioned
- Skid roads to be decommissioned
- Wallow restoration area
- No thinning treatment area: legacy trees or special consideration



0 1000 2000
Feet

4. Project Design Features

Project design features (PDFs) are included in the proposed action for the purpose of mitigating anticipated adverse environmental impacts which might stem from the implementation of the proposal. They apply to, and included as a part of, all action alternatives.

a. Yarding Systems

The proposed yarding systems would apply to the removal of both merchantable, precommercial-sized materials and fuelwood.

1) All systems

Tree length yarding is permissible. All logs would be limbed prior to yarding to reduce ground disturbance. Only existing spur/skid roads would be utilized.

2) Tractor Yarding

To reduce ground disturbance and soil compaction, yarding tractors would be limited to the smallest size necessary to do the overall job. Tractors would be equipped with integral arches to obtain one end log suspension during skidding. Tractors would be restricted to approved skid trails. Tractor logging would generally be restricted to slopes less than 35% although may occur on short pitches greater when included within a unit. Tractor-type logging equipment would not be authorized when soil moisture content at a six-inch depth exceeds 25% by weight as determined by a Speedy Moisture Meter.

Upon conclusion of use, skid roads would be water barred in a manner appropriate to the slope and soil type. Main tractor skid trails would be blocked with an earth barricade where they intersect haul roads. Tractor skid roads would be ripped with a winged-tooth ripper or subsoiler and waterbarred shortly after yarding is completed to reduce the erosion potential. Ripped skid roads would be planted with grasses and/or native shrubs. Other areas would be left to seed in naturally.

3) Cable yarding

Step landings would not be permitted. Cable yarding corridors would be waterbarred in a manner appropriate to the slope and soil type. All natural surface landings constructed or used during the thinning operation would be ripped with a wing-tooth ripper or subsoiler, straw mulched and seeded with grass, and/or planted with native plants upon completion of use and prior to the onset of the first rainy season.

4) Helicopter yarding

In any treatment unit, the contractor will have the option to helicopter yard in lieu of a ground based yarding system. Helicopter landings will be sized the minimum needed for safe operations. All natural surface landings constructed during operations would be ripped/subsoiled, and seeded with grasses and planted with native shrubs and trees. Slash would be used to cover fill slopes for erosion protection. Helicopter landings (service and log) would not be built within a riparian reserve or in

headwall areas.

b. Slash Treatment and Burning

Prescribed burning would be managed in a manner consistent with the requirements of the Oregon Department of Forestry's Smoke Management Plan and the DEQ's Air Quality and Visibility Protection Program. Smoke would be managed to preclude intrusion into air quality maintenance areas when air stagnation conditions exist. These conditions are usually described as "yellow" or "red" wood stove advisory days. Additional measures to reduce the potential level of smoke emissions would include: mop-up to be completed as soon as practical after the fire, burning with lower fuel moisture in the smaller fuels to facilitate their quick and complete combustion, burning with higher fuel moisture in the larger fuels to minimize consumption and burn out time of those fuels, and covering handpiles to permit burning during the rainy season when there is greater possibility of atmospheric mixing and scrubbing.

Prescribed underburning would be designed to be a low intensity burn over the majority of the burn area. This typically creates a mosaic burn effect with up to 15% of the burn treatment area with minimal to no fuel consumption. This is to reduce the loss of large woody debris, organic matter, and any conifer regeneration present. Burning would occur at any time of the year in which fuel moisture and weather conditions enable this type of burning and when it will minimize impacts to animals during their reproductive cycles.

In areas where Del Norte Salamanders are found, the occupied sites will be buffered and no burning would be done within these buffers.

All harvest units would be re-evaluated following thinning treatment to insure that the slash/fuel treatments are appropriate for the post harvest condition. The fuel treatments noted in Table 1 reflect the current best estimate of slash treatment needs. Proposed slash treatments would be reviewed after thinning / brushing and changed if it appeared that something different would better accomplish fuel treatment and/or site preparation needs while reducing the potential adverse impacts on air quality and site productivity.

c. Wildlife Trees and Dead and Down Material

All snags would be reserved from cutting and removal in all units, unless they pose a safety hazard. Should it be necessary to fell a snag due to worker safety concerns, the snag would be left in the unit. All pre-existing down woody material would be retained on the project area.

d. Stream and Riparian Habitat Protection

Riparian reserve widths would conform with the interim widths prescribed in the NFP (p. C-30) and the RMP. Table 3 indicates the appropriate riparian reserve widths.

Table 3: Riparian Reserve Widths	
Stream Class	Riparian Reserve Width**
III	340 feet (Two site potential tree lengths)
IV / unstable soils / springs	170 feet (One site potential tree length)

** Widths are slope distance on each side of stream and are determined in accordance with BLM Instruction Memo OR-95-075 (3/30/95).

In addition, Class V streams would be buffered with a 10' (slope distance) no-treatment buffer on each side of the stream.

e. Proposed Dust Abatement

Dust created on roads from log and pole hauling traffic would be abated to reduce driving hazards and protect the fine surfacing materials which bind the road surface rock thus increasing its longevity. Dust abatement would be in the form of water or lignin.

f. Cultural Sites

Proper protection of adits, old cabin sites and sites with scattered mining remnants would be implemented prior to activity occurrence. Any logging activity around the old mining ditch would be conducted in a manner that protects the integrity of the ditch. This may include directionally falling trees away from the ditches and will include avoiding using the ditches as a skid trail.

g. Seasonal Operation Restrictions

Table 4 outlines the seasonal operating restrictions that would apply:

Table 4: Seasonal Operating Restrictions			
Location	Restricted Activities	Restricted Dates	Reasons / Comments
Entire project area.	All yarding and hauling operations.	October 15 to May 15 of following year	Erosion Control. Some variations of the dates depending on weather and soil moisture conditions.
1/4 mile radius around any spotted owl. nest site.	All felling, yarding, chainsaw operation and prescribed burning.	March 1 to June 15	Dates and restriction dependent on nesting status. (Rogue River/South Coast Biological Assessment, Aug. 1996)
1/4 mile radius around any Red Tailed Hawk nest site.	All felling, yarding, chainsaw operation and prescribed fire.	March 1 to July 15	Dates and restriction dependent on nesting status. (BLM Instruction Memo OR-96-78).
Entire sale area - 1/4 to 1/2 mile radius around any raptor nest.	All felling, yarding and chainsaw operation..	Variable depending on the species.	(BLM Instruction Memo OR-96-78).
All harvest units and road construction ROWs.	Various activities depending on the species.	Variable depending on the species	Restrictions only if special status species are located. (BLM Instruction Memo OR-96-78).

Table 4: Seasonal Operating Restrictions			
Location	Restricted Activities	Restricted Dates	Reasons / Comments
Areas with Port-Orford Cedar present.	All yarding and hauling operations.	During the operating season when a rain event heavy enough to cause puddling in roads or water to run in ditches occurs.	To prevent the spread of <i>Phytophthora lateralis</i> . At the discretion of the Contracting Officer. (BLM Information Bulletin OR-95-003)

Some variations in these dates would be permitted dependent upon weather and soil moisture conditions.

h. Mollusks

Should any survey and manage mollusks be found, they will be protected by buffers recommended in the protocol.

i. Del Norte Salamanders

A tree-length, no commercial thinning buffer will be established around all occupied Del Norte Salamander sites in OI Units 34-8-27(007, 011, 018) and 34-8-34 (001). Should other occupied sites be discovered, they will be protected by the same buffer.

j. Botanical Resource Protection

Where Survey and Manage species are located (*e.g.*, *Cypripedium fasciculatum*, *C. montanum*, or *Allotropa virgata*), a no-harvest, no-ground disturbance protection buffer will be implemented with a minimum of 100-foot radius around each population. On *Cypripedium spp.* sites, no slashing or burning would take place. Federal or state listed or candidate species or Bureau sensitive species (*e.g.*, *Sophora leachiana*), will receive a minimum 100-foot radius no-harvest, no-ground disturbance buffer. For other special status species, a protection buffer size will be determined on a case-by-case basis depending on the species' habitat requirements.

For all protection buffers, trees will be directionally felled away from buffer edges.

Burns in areas containing special status plant species would follow prescriptions that result in "cool" burns which minimize potential damage to plant populations. Prescribed fire operations would be done in a manner which strives to reduce or eliminate burning through identified special status plant population areas depending on the adaptability of each species to fire. Prescribed fire contracts would articulate the necessary steps to reduce or eliminate fires in these sensitive areas.

If non-vascular S&M plants are located, they will be buffered according to S&M Management Recommendations in effect at the time of the decision.

k. Port-Orford Cedar

Port-Orford Cedar is present in the project area, primarily in the non-treatment riparian reserves. Vehicles and machinery entering the treatment units or leaving the paved road surface in the treatment area would be washed at an established washing station as described in BLM's Port-Orford Cedar

Management Guidelines.

1. Fuel Hazard Reduction

Along roads identified in Table 2 for roadside pruning, all leave trees will be pruned to $\frac{1}{2}$ of the tree height or 12 feet, which ever is less (leaving a crown ratio of at least 50%). Trees would be pruned if within 25 feet uphill and 50 feet downhill of the road edge (slope distance). (Pruning would be on less than 1% of the project area.) This will reduce the potential for a stand-replacing fire incident, and provide for a more defensible zone in case wildfire should enter the area. The slash generated by this treatment would be hand-piled and burned.

Chapter 3

Environmental Consequences

A. Introduction

Only substantive site specific environmental changes that would result from implementing the proposed action or alternatives are discussed in this chapter. If an ecological component is not discussed, it should be assumed that the resource specialists have considered affects to that component and found the proposed action or alternatives would have minimal or no affects. Similarly, unless addressed specifically, the following were found not to be affected by the proposed action or alternatives: air quality; areas of critical environmental concern (ACEC); cultural or historical resources; Native American religious concerns; prime or unique farmlands; floodplains; endangered, threatened or sensitive plant, animal or fish species; water quality (drinking/ground); wetlands/riparian zones; wild and scenic rivers; and wilderness. In addition, hazardous waste or materials are not directly involved in the proposed action or alternatives.

General or "typical" affects from projects similar in nature to the proposed action or alternatives are also described in the EIS and plans this EA is tiered to.

B. Site Specific Beneficial or Adverse Effects of the Alternatives

1. Resource: Soils and Hydrology

a) Affected Environment

This project is on two sections of land located in two 6th field watersheds (6th FW) of the Rogue - Recreation 5th field watershed: Rogue-Galice (southern part of project area) and the Rogue-Rec Section (northern part of project area) 6th fields. The Rogue-Galice 6th field watershed encompasses Galice Creek and its tributaries. The Rogue-Rec 6th field watershed encompasses the Rogue River and its tributaries from downstream of Galice Creek to Grave Creek.

The project area is located on the ridgetop and upper portion of the slopes. Elevations range from 1,800 to 3,500 feet. The area contains Class 3, 4 and 5 streams which drain into North Fork Galice Creek, Rich Gulch or the Rogue River. The uppermost portion of the project area is in the transient snow zone. Precipitation is in the form of rain or snow and averages 42-50" annually.

Soils in the project area are comprised of five different soil types (Soil Survey of Josephine County Oregon, SCS). Josephine gravelly loam is found on 35-55% north slopes. This deep, well-drained soil has low permeability which results in rapid runoff and high erosion potential. Pollard loam is found on 12-20% slopes in saddles and on ridgetops. It is deep and well-drained. Runoff is medium and the hazard of erosion is moderate. Speaker-Josephine gravelly loams are found on 35-55% south slopes. Speaker-Josephine are moderately deep and deep (respectively) and both are well-drained. They have rapid runoff and high erosion-potential. Vermisa-Beekman complex is located on 60-100% north and south slopes. Vermisa soil is shallow and somewhat excessively well-drained. Beekman soil is moderately deep and well-drained. Runoff is rapid and the erosion hazard is high. Vermisa-Beekman, Speaker-Josephine, Josephine, and Pollard loam all contain small percentages of soils that have serpentine inclusions.

The project area contains mining ditches and ditch remnants which are breached and which contribute to active erosion during the wet season. The road extending onto the private land in section 34 is carrying water that is also resulting in active erosion in the area.

b) Environmental Effects - Short and Long Term

Table 5 provides ratings for local effects of the various practices within the alternatives:

Table 5: Ratings for Local Hydrological Effects of the Various Practices within the Alternatives				
6 th Field Watershed	Term	Type of Effect	Alt. 1 (No Action)	Alt. 2 (Proposed Action)
Rogue-Galice	Short (1-5 yrs)	Disturbance / Erosion	0	0
		Added Compaction	0	Minimal +
		Productivity	0	Minimal -
		Sedimentation from haul roads	0	Minimal -
	Long (5-20 yrs)	Disturbance / Erosion	Minimal-*	0
		Compaction	Minimal -*	Minimal +
		Productivity	Slight-*	Slight +
		Sedimentation from haul roads	Minimal -*	0
Rogue-Rec. Section	Short (1-5 yrs)	Disturbance / Erosion	0	0
		Added Compaction	0	Minimal +
		Productivity	0	Minimal -
		Sedimentation from haul roads	0	Minimal -
	Long (5-20 yrs)	Disturbance / Erosion	Minimal -*	0
		Compaction	Minimal -*	Minimal +
		Productivity	Slight -*	Slight +
		Sedimentation from haul roads	Minimal -*	0

Footnote: Effects ratings : (-) = negative effect; (+) = positive effect; (0) = neutral effect

Minimal = very little, limited to few sites

Slight = little distributed over most affected area

Moderate = mid level

* These effects are assuming the occurrence of a fire, due to the high fire hazard in the area.

Note that the Disturbance/Erosion change is judged to be 0. This reflects the aggregate of “minimal -” from roads and “minimal +” from the streams currently intercepted by ditches being returned to natural flows.

The proposed project on the road in the private part of Section 34 will result in a localized reduction of erosion/disturbance.

c) Cumulative Effects

1) Alternative 1: No Action

There would be no added direct cumulative effects. However, there is a strong probability of a hot

wildfire in these dense stands given current conditions and trends. This wildfire would, in itself, create high levels of early seral stage vegetation for a relatively short period of time (approx. 10 years). During that time stream yield and sedimentation would likely increase. In addition, increasing the existing high road density in conjunction with fire fighting would add to the streams' peaks and lows as well as add to soil compaction. This would add to existing levels of cumulative effects.

2) Alternative 2: Proposed Action

Added cumulative hydrologic effects at the 6th field level due to this project are negligible. There will be no increase in road density and there will be a decrease in the extent of soil compaction.

The mining ditches currently intercept water from streams in the area. With the number of ditches in the region, this results in a multiplied effect of altered drainage network over the watershed. Bringing the natural flow back to some of these tributaries will contribute to a decrease in the overall current adverse effect of the ditches on the watershed.

The proposal's additional hydrologic cumulative effects at the 5th field watershed level are negligible.

2. Resource: Vegetation

a. Affected Environment

The project's two section area consists primarily of an overstory of even aged 35 - 50 year old ponderosa pine plantations on former clearcuts. Individual tree vigor has begun to decline due to competition in these stands. Past precommercial thinning (12'x12' spacing) with subsequent fertilization has created dense plantations with a loss of structural diversity. There is very little development of different canopy layers within them. Tanoak, huckleberry oak, canyon liveoak, and evergreen huckleberry are present throughout the understory, inhibiting development of the understory conifers. Many of these stands are of off-site pine as they were planted with seed and seedlings from sources outside the local seed zone and elevation. Due in part to fertilization, individual 40 year old ponderosa pine trees have grown to 20" DBH. However, these stands are beginning to exhibit poor vigor and nearly all show evidence of the needle cast Bynum's Blight (*Lophodermella morbida*). The amount of pine present is well above of the normal range for the two major plant associations appropriate for the site (Lide3-Arcto3-Xete and Lide3-Psme-Quch2/Rhdi6). A more natural stand with an appropriate range of plant species (tree, shrub, and forb) for those plant associations is emerging beneath the ponderosa stands. Also, these stands have a few residual large trees and patches showing old-growth characteristics. The average diameter of stands previously harvested from this area was 32" DBH. The broken topography, change in soils, and frequent disturbances may account for the often wide sporadic spacing and patchiness of conifer trees (evident by the stumps) of these natural stands. Often the previous stand contained conifers located in clumps or rings of 5-10 trees and then spaced by distances of 30-70'.

Nearly all the area has been influenced by prescribed fires or wildfire in the last fifty years. Today, the forest stands have dense ladder fuels present in portions of the stand creating conditions favorable for crown fires which could result in large stand replacing fires. The area is accessed by a paved road and contains numerous skid roads. Many of the skid roads are now revegetated and stabilized, however, there are some segments where past compaction has prevented revegetation.

Rock intrusions, meadows, and non-forest areas of 1 to 4 acres are scattered throughout the project area as well as on the adjacent private lands. Serpentine influence is evident by the scattered knobcone pine patches as well as the vigor of natural and planted Jeffery Pine.

b. Environmental Consequences

1) Alternative 1: No Action

The trees in these stands have thin, poorly developed crowns. The less dominant trees will continue dying out as they are out-competed for sunlight and nutrients. The radial growth of the residual trees will continue to slow as the trees compete with one another. Eventually, the canopies in the stands will begin to open up as a result of mortality in the overstory, resulting in snags, then down wood, as well as some acceleration of growth of the surviving trees. The snags and down logs formed as a result of these long term processes would be small, and the surviving trees would also be smaller diameter, with small crowns and few or no large branch structures. The smaller diameter trees, with few or no large branch structures, will provide very little habitat for tree-dwelling species and cavity nesters. Small trees, when dead, will not contribute to coarse wood for soil building and aquatic processes. As the young conifers and shrubs die, they will increase fine fuel loadings to a level high enough to create a real potential for a stand-replacing fire event. Hardwoods and shrubs will be lost from the stands, as the dense and uniform conifers shade them out. This diversity and habitat component may be lost.

Development of a second canopy layer will be slow, it will only develop when openings due to mortality occur, allowing light and space for seedlings to establish. This understory development is an important component of wildlife habitat and forage, and has an effect on nutrient cycling, both of which will be diminished as crowded, even-aged conifers close in and compete for light and nutrients. Large (hard) snags and large diameter conifers will not occur within the next several decades without numerous small disturbances or the more likely widespread catastrophic disturbance that will occur when the dominating offsite pine start dying out.

Previous management of the riparian areas have left them similar in vegetative characteristics to the upland area. Restoration of large woody material and natural riparian processes in higher order stream reaches will not occur without release of existing upland riparian vegetation by slow, density-related mortality, or by a large or stand-replacing event.

Douglas-fir and pine species might not persist in the understory on some sites as shade-tolerant species (*e.g.*, tanoak, huckleberry oak) begin to dominate the stand. Tanoak, huckleberry oak, liveoak, and evergreen huckleberry are and will remain a major competitor to conifer stocking. Tanoak becomes established and persists frequently in the shade beneath an overstory canopy, even under very low light conditions and often beneath an understory. Tanoak and other shade tolerant species are abundantly successful as an understory tree which may become large in “gap” openings that occur naturally by blow downs and light ground fires. Tanoak sprouts from dormant basal buds, following browsing and other disturbance events. A change to more favorable conditions may result in increased growth leading to canopy status after many years in the understory. This would reflect a change from the natural mixed-conifer mosaic that grew on the site before harvested 35 years ago.

2) Alternative 2: Proposed Action

The proposed silvicultural systems manage for mixed conifer stands and will retain features of original stand as the later seral conifers and hardwoods will be reserved in the marking process. The commercial thin in these units will capture wood volume of suppressed conifers or offsite conifers, redistribute growth potential to the residual trees and in many instances, release conifer reproduction. Important characteristics of the existing stand structure will be retained: average of 40+% canopy retention, snags, down logs, and hardwood components. The units will be marked to a residual density, that, while highly variable to provide habitat continuity over time, subsequent thinning could occur in 20 years.

ORGANON growth modeling was used to simulate growth for a portion of the area that represents the highest volume areas. The program removes certain diameter classes (mostly offsite pine) and shifts the residual stand through a 30-year cycle that maintains dispersal habitat for spotted owls and could eventually reach old growth stand conditions.

Table 6: Residual / Post Treatment Stocking (estimated)

Tree Species	# Trees / acre				Basal Area (ft ² /ac)				MBF/ac (estimated)		
	Current	Proposed Leave	Proposed Cut	30 year projection	Current	Proposed Leave	Proposed Cut	30 year projection	Current	Proposed Leave	Proposed Cut
Douglas-fir	189	132	57	116	113	77	57	125	7.5	5.3	2.2
Ponderosa Pine	151	48	103	33	111	41	69	51	5.1	2.0	3.1
Other Conifer	5	5	0	5	1	1	0	1	0.0	0.0	0.0
Hardwood	81	81	0	48	49	49	0	52	0.0	0.0	0.0
Totals	428	268*	160	204	273	169	105	229	12.6	7.3	5.3
*This is an average of the expected range of leave trees per acre. Cut/leave based on 1 1/2x crown-based spacing. Post treatment: Mean diameter is 9.5 inches. Relative density is approx 0.5. Crown closure 30- 70%. Range of leave trees per acre is 80-300. 30 year change: Mean diameter is 16 inches. Relative density is approx 0.7. Crown closure 30-100% .											

3. Resource: Wildlife - special status/manage and survey species and their habitats

a. Affected Environment

The Peavine project area is located in the Rogue-Recreation Section 5th field watershed. Both BLM and Forest Service administered lands are located in the watershed. The BLM manages 39,085 acres (41% of the watershed) within this watershed. The majority of the lands managed by the BLM are dominated by forest, with small inclusions of non-forested areas. Past land management action within this watershed include recreation, mining, road construction, and timber harvest. The project area is located within the Galice Creek and upper reaches of Rocky Gulch drainages.

The Rogue-Recreation watershed has a mix of NFP land use allocations. A portion of the Fish Hook/Galice Late-Successional Reserve (LSR) is located in the northwest corner of the watershed. There are 13,765 acres of LSR in the watershed. The remainder of the land is within the matrix, riparian reserve, congressionally reserved (Rogue Wild and Scenic River), managed LSRs (*i.e.*, Northern Spotted owl core areas) land allocations. There are also some Administratively Withdrawn Areas. The Peavine project area is within the Critical Habitat unit identified by the USFWS.

The project area lies within an RMP designated elk management area. Management objectives within this area include enhancing elk habitat in a manner consistent with other objectives. Goals include reducing the open road density to 1.5 miles per section and using seasonal restrictions to reduce disturbance potential.

All requisite special status species surveys, except those for molluscs, have been completed in accordance with the January 2001 SEIS. Mollusc surveys are currently in progress.

Habitats within the project area include woodlands, riparian, meadows, early seral forest, mid-seral forest, snags, down wood, and brushfields. There are habitats for a number of sensitive species including Del Norte Salamanders* (*Plethodon elongatus*), Goshawks (*Accipiter gentilis*), and other raptors as well as all five species of buffer species bats identified in NFP-ROD (* these species have been detected). The proposed project falls within the home range of four spotted owl sites.

b. Environmental Consequences of Alternatives: Individual species

1) Northern Spotted Owls (NSO)

Currently there are approximately 8,550 acres of suitable spotted owl habitat on BLM administered land in the Rogue - Recreation watershed (4,258 McKelvey #1 and 4,292 McKelvey #2). A majority of this habitat is within the Galice/Fishhook LSR (4,651 ac. or 52%) portion of the watershed. Late-successional forest habitat is also located outside the LSR in riparian reserves, in NSO cores and on matrix designated land. The USFWS has designated 24,953 acres of Spotted Owl Critical Habitat within the watershed. Approximately 6,416 acres of the BLM portion of the Critical Habitat is suitable habitat for spotted owls. The entire Peavine Project area is within the designated Critical Habitat.

There are currently eight designated 100 acre spotted owl core areas on BLM land in the watershed four of which are within 1.3 miles of the Peavine project area.

a) Alternative 1: No Action

The four spotted owl sites within 1.3 miles of the Peavine project area would remain at their current habitat levels, which are above the USFWS's viability threshold standard of 1,388 acres.

b) Alternative 2: Proposed Action

The proposed action alternative would not alter suitable spotted owl habitat. A limited amount of marginal dispersal habitat is scattered throughout the proposed project area where it is found primarily in widely scattered pockets of mature forest. Under this alternative, these areas will be viewed as diversity pockets and will receive no treatments. The proposed action would alter a minor portion of the dispersal habitat found outside of these reserve pockets. Considering the amount of mature forest in the landscape surrounding the project the loss of this dispersal habitat would be very minimal.

The USFWS uses thresholds for the amount of suitable habitat around spotted owl sites as an indication of a sites viability productivity. The amount of suitable habitat threshold used to determine incidental take is set at 40% of the area within 1.3 miles of the center of activity (about 1,388 acres). The Peavine project is not anticipated to alter any suitable NSO habitat. All four owl sites with home ranges within the project area will remain above the threshold level. The planned action may accelerate the development of late-successional forest components such as large trees and snags, to the long term benefit of the NSO.

In conclusion, the proposed action's potential impact on the NSO is negligible.

2) Red Tree Vole (RTV)

The Red tree vole is an arboreal species of rodent with very low dispersal capabilities. It is a Survey and Manage species under the NFP. There is no RTV habitat in the project area.

a) Alternative 1: No Action

The forest would continue to go through developmental stages towards older forest conditions which would be beneficial to the RTV and other species associated with late successional forest habitats.

b) Alternative 2: Action Alternatives

The proposed precommercial thinning and brushing throughout the project area, may hasten the development of potential red tree vole habitat in the long term thereby contributing to the maintenance of the species in the project area and watershed.

3) Northern Goshawks

Northern Goshawks are found in a variety of mature forest types. Locally, they have been noted in stands ranging from old growth to younger second growth stands that have a high canopy closure with room to fly beneath the canopy. Approximately 50 acres of marginal potential habitat for Northern Goshawks (*Accipiter gentilis*) is scattered throughout the Peavine project area where remnants of older forest exist. Formal surveys are not currently required for this species.

a) Alternative 1: No Action

The forest would continue to go through developmental stages towards older forest conditions which would be beneficial to the Goshawks and other species associated with late-successional forest habitats. The risk of stand replacing fire would continue to be high and the probability of a stand replacing fire would continue to elevate. This puts species obligate to these habitats at increasing risk.

b) Alternative 2: Proposed Action

The proposed commercial thinning would modify approximately 50 acres of nesting habitat to a non-nesting condition/quality. The proposed action's precommercial thinning and brushing would hasten the development of potential Goshawk habitat in the future which could contribute to the maintenance of the species in the project area and watershed.

4) Del Norte Salamander

Del Norte salamanders (*Plethodon elongatus*) occur in rock and talus areas. These types of areas are limited in the project area. Surveys of the project area have located the salamander and the areas will be buffered from all ground disturbing activities.

a) Alternative 1: No Action

The forest would continue to go through developmental stages towards older forest conditions which would be beneficial to the Del Norte salamanders and other species associated with late-successional forest habitats. The risk of stand replacing fire would continue to be high and the probability of a stand replacing fire would continue to elevate putting species obligate to these habitats at increasing risk.

b) Alternative 2: Proposed Action

Because occupied Del Norte salamander sites are being avoided, there are no anticipated effects to the species.

5) Molluscs

a) Alternative 1: No Action

The forest would continue to go through developmental stages towards older forest conditions. There would be an increase in habitat conditions for species requiring late-seral conditions. Foraging opportunities for species that forage on hardwood leaves would diminish as the trees are displaced through succession. The potential for a fire in the project area would remain high which, if occurred, could be deleterious to the local habitat and mollusc populations.

b) Alternative 2: Proposed Action

Surveys for S&M mollusc species are currently in progress. This group generally require cool moist environments with the exception of *Helminthoglypta hertleini* which may utilize rocky talus in open exposed slopes. If found, the current management recommendations for buffers / protection will be implemented. Consequently, adverse impacts on mollusc are not anticipated.

6) Big game

a) Alternative 1: No Action

The forest would continue to go through developmental stages towards a stem exclusion phase in which a large percent of the off-site pine would become snags and down wood. Tree densities would vary from relatively open fast growing trees to dense pockets of slow growing trees. The meadow would continue to develop towards a forested condition. Current road densities would remain the same.

Big game species requiring early seral habitat for foraging such as elk (*Cervus elaphus*) and black-tailed deer (*Odocoileus hemionus*) would continue to lose foraging habitat. In the long term they would gain optimal thermal habitat.

b) Alternative 2: Proposed Action

Precommercial and commercial thinning stands will accelerate the successional pattern toward more optimal thermal cover, while at the same time decrease the time that understory forage species are available. Short term affects include an increase in understory forage due to an increase in resources such as light. In the long term, the stand will begin providing optimal thermal cover and forage will be limited to decommissioned skid roads, yarding landing sites, road sides, serpentine areas as well as areas affected by disturbances such as fire and blow down.

The increase in activity in the area associated with the proposed project will have a adverse short term affect on elk and deer. Studies have shown that vehicular disturbance causes wildlife harassment and stress thereby causing reduced reproduction, higher mortality and increased poaching (Brown et al, 1985) which could result in a local reduction in elk and deer.

Restoration of the wallow and associated grassland will have a long term beneficial affect on deer and elk populations by providing a permanent forage location in a forest dominated landscape.

c. Cumulative Effects

The current project does not proposed any harvesting in late-successional forest habitat. It's purpose is to alter current stand successional trajectories of early and mid seral stage stands to accelerate the creation of this type of habitat in the long term. This will positively contribute to accomplishing the LSR management goals for the Fish Hook / Galice LSR.

4. Resource: Fire and Fuels

a. Affected Environment

Hazard is defined as the existence of a fuel complex that constitutes a threat of wildfire ignition, unacceptable fire behavior and severity, or suppression difficulty. *Risk* is the source of ignition be it human or lightning. A fuel hazard and wildfire occurrence risk rating analysis was completed for the Rogue - Recreation Watershed. This analysis included the Peavine project area.

Wildfire occurrence *risk* for all lands in the project area is rated as high overall. Acreage ratings are: 524

acres of high risk, 118 acres of moderate risk, and 0 acres of low risk. The fire risk rating assigned for watershed analysis was determined during field data collection in the summer of 1997. The current high level of risk is primarily due to human use and historical lightning activity. Risk is difficult to change or influence through land management activity as it is a function of weather events (lightning) and human behavior. Reducing public access can reduce human caused fire and affect risk, but reducing access for fire suppression forces can increase fire size and effects. Human use in the future would be expected to increase but the influence in terms of affecting risk is difficult to determine. Therefore, for the purpose of this analysis, risk is considered to not be affected by future human development nor any activity in this project proposal and is thus considered unchanged for the 20 year analysis period.

Fuel includes both dead and down woody debris and live vegetation. The fuel ***hazard*** it creates is dynamic and changes over time and can be altered through land management activities. The natural process of wildfire occurrence prior to settlement in the 1800's prevented large scale fuel build-up. This fire regime was one of frequent, low-intensity surface fires which prevented excessive understory vegetation development and the build-up of large amounts of dead and down woody debris. With human settlement and the suppression of wildfire, fuels have been allowed to accumulate and dense vegetation has grown unchecked. Fuel hazard will increase over time in the absence of disturbance or land management activities which remove or reduce fuels. Without disturbance, fuel hazard conditions become more uniform and continuous. This increases the potential for large, high severity fire occurrence. Dense, overstocked stands are a contributing factor to large stand replacement fire occurrence due to the closed canopy and ladder fuel presence.

Fire exclusion has produced a declining acreage of meadow and oak woodland. These areas historically were fire dependent and maintained. Encroachment by conifers and shrubs have altered these habitats.

Table 7 shows the current fuel hazard condition rating by acres and percent for all acres of BLM land within project area. It projects the change in hazard over time, short term (5-10 years), and long term (10-20 years) for the No Action Alternative and Alternatives 2.

Table 7: Hazard Rating by Acres and Percent for Lands Considered in Peavine Project EA Area				
Alternative	CONDITION	HIGH HAZARD	MODERATE HAZARD	LOW HAZARD
--	CURRENT CONDITION	68 % 437 acres	26 % 168 acres	6% 37 acres
ALTERNATIVE 1 - NO ACTION	5-10 YEARS	76 % 486 acres	24% 156 acres	0 % 0 acres
	10-20 YEARS	100 % 642 acres	0 % 0 acres	0 % 0 acres
ALTERNATIVE 2	5-10 YEARS	29 % 186 acres	0 % 0 acres	71 % 456 acres
	10-20 YEARS	39 % 249 acres	45 % 292 acres	16 % 101 acres

Projections on future hazard are based on current vegetation conditions and known trends of vegetation development in the represented plant associations. The trend for the next 20 year period is for increasing vegetation density and/or increasing dead and down fuel accumulation. Future management activity is unknown at this time, but it would affect the hazard so this assessment assumes no future activity. Current condition is the existing situation at the time of field data collection during the summer of 1997.

b. Environmental Effects

The following assumptions were used in the assessment of effects of the proposed treatments on hazard. The time period of 20 years is considered the longest time interval before further management activity would be prescribed. Treatments which harvest timber and/or cut vegetation without treating the slash increase the hazard rating to HIGH. Hand piling and burning reduce the hazard rating by one factor (*e.g.*, HIGH to MODERATE, MODERATE to LOW). Density reduction treatments in both the overstory and understory with underburning or hand piling and burning reduce the hazard rating to LOW. Broadcast burning and underburning reduce the hazard rating to a LOW category. Understory treatments in conjunction with prescribed burning are considered beneficial in both the short and long term as the effect of ladder fuel reduction and stocking reduction creates a fuel profile that is less susceptible to fire reaching the tree crowns.

Stands that are not or will not be at or near mature conditions within the 20 year time frame are still susceptible to stand replacement from wildfire events due to conditions such as thin bark, high crown ratios, presence or ability to reestablish ladder fuels, and continued stand mortality. The trend in these stands is for treated and untreated areas to increase in hazard as vegetation in the understory increases, crown closure occurs, and dead and down fuels accumulate. For those stands that were underburned and are at or will reach mature conditions within the 20 year time frame, it was assumed that these stands would remain in the LOW hazard rating. Stands that are currently younger and in mid serial stage conditions, and would not have as much down fuel removed (hand pile burn units) increase in hazard by the long term period and return to the HIGH and MODERATE rating categories.

Table 5 includes harvest and hazard reduction treatments in Alternative 2. These include treatments on a total of 642 acres: commercial thinning, and/or understory treatment, and prescribed fire use. Actual use of prescribed fire is anticipated to occur on only approximately 60 to 70% of the 642 treatment acres. Prescribed burning prescriptions would be designed to limit overstory mortality and meet visual resource objectives.

1) Alternative 1: No Action

The No Action Alternative would continue the current trend: increasing fuel hazard over time. With the absence of natural, low-intensity, frequent fire occurrence, dead and down fuels and live fuels will increase over time. The fuels buildup creates conditions that lead to high-intensity, stand replacement fire. Currently 68% of the area is in a high hazard condition. This increases to 76% within the short time period. The large percentage of high hazard is a result of the dense stocking, multi-canopy nature of much of the vegetation in the project area. The trend of increasing high hazard fuel conditions will reach near 100% of the acreage in the 10 to 20 year long-term time frame.

2) Alternative 2: Proposed Action

Alternative 2 has hazard reduction treatments that will reduce and remove fuels. The hazard reduction treatments will shift those acres into lower hazard conditions. Alternative 2 would have a short term (5-10 years) affect of reducing the amount of high and moderate hazard from the current combined 94% to a combined 29%. The amount of lands in the low hazard goes from the current 6% to 71% for short term. The hazard rating shifts to higher hazard levels 10 to 20 years after treatment. It does not return to the current condition level due to the size of many of these stands. Over the next 10 to 20 years a portion of

these stands will develop resistance to low to moderate intensity fire due to thicker bark.

The hazard reduction treatments in the Alternative 2 will reduce hazard conditions in both the long and short term. A wildfire occurrence within the treated areas would result in less severe effects due to the reduction in fuel amounts. The removal of dead and down fuel and ladder fuel from the forest areas reduces the amount of fuel available to burn when wildfire occurs in those areas. Wildfire will burn with less intensity, duration, and flame length. The proposed treatments would create areas of lower intensity burning which provide suppression forces opportunities to contain the fire spread. They also provide less fuel to "feed" a large fire and add to its energy. This increases the ability of fire suppression forces to protect forest resources and to limit the size of wildfire. Reducing the size and amount of high intensity burn area from a wildfire would have a short term beneficial effect in maintaining the forest and visual resources within the watershed, as well as reducing effects on stream and water quality.

c. Cumulative Effects

1) Alternative 1: No Action

The no action alternative results in the continued buildup of hazardous fuels thereby increasing the potential for large scale, catastrophic fire occurrence within the project area. This has the potential to impact both the project area and the adjacent drainages. Large scale catastrophic fire events are natural but rare events in the watershed given the involved vegetation plant associations. Impacts of such an event on visual, wildlife, and forest conditions would be extreme. The percentage of acres that might burn in high intensity could range from 30 to 60%, with as little as 20% or less burned with low intensity.

2) Alternative 2: Proposed Action

The proposed stocking density reduction and fuel hazard reduction treatments in this Alternative would substantially alter the fuel hazard within the project area. There would be little effect at the sub-watershed and larger landscape scale, however, due to the small scale of the project. Over time fuel hazard would increase unless re-treatments or maintenance treatments were implemented.

5. Resource: Botany

a. Affected Environment

The Peavine project area has been completely surveyed for vascular special status and Survey and Manage (S&M) species. Surveys for the non-vascular species (lichens and bryophytes) protected under the Northwest Forest Plan have also been completed. Some early fungi surveys were done, however, pre-disturbance surveys are no longer required (Survey and Manage SEIS).

The dense, early seral stage of the majority of the project area does not lend itself to habitat for the S&M vascular plants. The areas where late-successional forest conditions exist are favorable for these species. One population of *Cypripedium fasciculatum* was located during surveys. *Cypripedium fasciculatum* (CYFA) habitat occurs primarily on moist, northerly aspects (anywhere from west to north to east slopes) in older forests with greater than 60% canopy closure. This orchid species is very long-lived, can take up to 15 years to emerge above ground, and requires specific mycorrhiza for germination and establishment. CYFA occupies a range from central Washington to northern California with some scattered populations in

the Rocky Mountains. The species sparsely covers this range. CYFA is currently considered threatened or sensitive in most states and is listed in Utah. It is a Bureau Sensitive species under BLM policy and a Species of Concern with the USFWS, besides being a Survey and Manage (Strategy 1 and 2) species. Appendix J-2 recommends maintaining canopy closures and microsite conditions for all populations.

The Peavine area is a major population center for the narrow endemic *Sophora leachiana*. The Speaker-Josephine soil is advantageous to the growth of this species which is currently known as limited to the Peavine/Galice/Picket Creek area and the Kalmiopsis wilderness area. The species appears to have a low ability to disperse because of a low proportion of viable seeds. Its tendency to grow in openings has allowed this species to thrive in disturbed areas such as skid trails or burns. This species is a Bureau Sensitive species under BLM policy, a Species of Concern under the Federal Endangered Species Act and is a candidate species under the Oregon Endangered Species Act. One population was found in the project area in Section 34 and two more are located immediately adjacent to the project area.

The Protection Buffer bryophyte, *Ulotia megalospora*, was found in one location. This population was growing on canyon live oak. The species is a pioneer bryophyte on twigs and branches in the canopy of coniferous and deciduous trees, where lichens rather than bryophytes are the dominant non-vascular species (Pike et. al. 1975). Management recommendations for this species state that habitat should be maintained for disjunct or localized populations. Since little survey work has occurred in the immediate vicinity of the Peavine Thin, it should be considered localized for the purpose of this EA.

The Strategy 1 lichen *Dendroscocaulon intricatulum* (*Sticta* sp.#1) was also found in the project area in one location. It is usually found on hardwoods located where high moisture is provided by the surrounding Douglas-fir forests. It is highly dependent on intact forest to protect its moisture requirements. It is also a cyanolichen which means it is highly susceptible to air pollution such as smoke from fires. Management recommendations require that its habitat/microclimate not be disturbed.

In 1998 the Survey and Manage fungi species, *Bondarzewia mesenterica*, was also found in Section 34. It was associated with a Ponderosa pine stump in an area with many large stumps and downed woody debris. The species is apparently parasitic or saprophytic, reportedly causing white stringy root rot in living pine species (Castellano & O'Dell 1997). Very few (12) known locations of the species have been reported in Washington, Oregon and California, although several new sightings have been found on the Medford District since surveys began in the fall of 1998. Management for this species includes maintaining its dominant overstory associates and microclimate, minimizing loss or disruption of host tree snags or stumps and managing tree diseases. The proposed action will provide a buffer after consultation with the Regional mycologist in order to ensure that adequate habitat will be protected for this population. Although serpentine soils exist within the project area in Section 27, no serpentine-related special status plants were found.

b. Environmental Consequences

1) Alternative 1: No Action

The small amount of late-successional forest that currently exists in the project area would continue to exist. This may be advantageous for health of the *Cypripedium fasciculatum* population found there. On the other hand, adjacent overstocked plantations would allow for the build up of a hazardous fire situation considering that most of the area is a single, dense canopy layer. A high intensity wildfire could eliminate

the population (Appendix J-2), which could very well be the only existing population in the Mt. Peavine vicinity (due to lack of habitat).

Over time, canopy closure in the currently open areas (both disturbed and natural) would increase which would be detrimental to the continued existence of the *Sophora leachiana* populations found within and adjacent to the project area. Because of its tendencies to grow in openings this species is probably adapted to natural levels of fire (pre-suppression levels). It is unknown whether this species could survive a high intensity wildfire.

The No Action alternative would ensure that the actual substrate of the non-vascular plant populations (*Ulotia megalospora*, *Dendriscocaulon intricatum*) will not be disturbed. The buildup of hazardous fuels in the area could in the long run be detrimental to the viability of these populations.

2) Alternative 2: Proposed Action

This alternative would be advantageous for increasing the chances for *Cypripedium fasciculatum* dispersal in the future as long as the known population and remaining late-successional habitat can be protected.

The openings created through thinning will also increase the potential for expansion of known *Sophora leachiana* populations as long as current populations are avoided by logging equipment. As mentioned in the PDF's the population within the project area will be buffered. This may require some re-routing of skid trails to avoid population centers.

As long as the non-vascular populations and their microsites are protected through the buffering discussed in the PDFs, these two species will remain viable in the project area. The future increase in late successional habitat could assist in increasing these species' viabilities by providing dispersal habitat.

c. Cumulative Effects

Due to the lack of surveys outside of timber harvest areas or in the LSRs, there is incomplete information regarding the overall abundance of these species on BLM lands. No official CYFA habitat assessment has been done in southwestern Oregon. However, of the known CYFA population sites on BLM land, the majority are being affected by timber projects through canopy thinning, ground disturbance and habitat fragmentation. Of the known populations, the majority are being protected through buffers that have not yet been proven to ensure viability for a specific population. The LSRs may not be providing mitigation for these species, since the majority of populations and potential habitat exists in the mixed evergreen vegetation more common on the Matrix land allocation.

The reasonably foreseeable future actions that will take place in the Matrix and on county and private land will include continued timber harvest, understory treatments and clearing of forest land for development. Most likely, actions such as Peavine project which focuses on thinning of younger stands, will take place which could, in the long term, provide needed habitat for *Cypripedium fasciculatum*, *Ulotia megalospora*, and *Dendriscocaulon intricatum*. Any populations on non-federal lands will most likely remain unprotected.

Cumulative effects on *Sophora leachiana* will most likely be favorable since ground disturbing activities will create the openings favored by this species. Such activities replace the natural disturbances such as

natural fire cycles that this species probably depended upon. Too much disturbance in population centers could result in individual populations being eradicated before there is a chance for dispersal.

References cited:

Pike, L.H., W.C. Denisen, D.M. Tracy, M.A. Sherwood, F.M. Rhoades. 1975. Floristic Survey of Epiphytic lichens and Bryophytes Growing on Old Grown Conifers in Western Oregon. *Bryologist* 78:389-402..

Regional Ecosystem Office. Management Recommendations - Bryophytes. 1998.

Regional Ecosystem Office. Management Recommendations - Lichens. 2000.

Regional Ecosystem Office. Management Recommendations - Vascular Plants. 1998

6. Resource: Fish

a. Affected Environment

There are no fish bearing streams or ponds present within the project area boundaries. The project area is, however, tributary to streams which are fish bearing. South Fork Rocky Gulch is a class II stream. Cutthroat trout are found in the first one mile of South Fork Rocky Gulch, 1/3 mile downstream from the project area. Blanchard Creek is a tributary to Galice Creek at mile 2.0. Galice Creek is class I stream containing coho salmon, steelhead, and cutthroat trout; coho salmon and steelhead are found in the first three miles, and cutthroat trout are found in the first eight miles.

Galice Creek is a very flashy stream. The geomorphology of the stream channel contributes to very high winter flow. As a result, there are relatively low levels of large woody debris within the system. Macroinvertebrate health is low.

b. Environmental Consequences

1) Alternative 1: No Action Alternative

There would be no change in fish habitat conditions. The range of sediment levels entering streams from roads in the project area would continue as they have. The current diversion of water from streams by the mining ditches would continue. No substantial changes are anticipated with regard to water quality and fish habitat / productivity over the short or long term unless, as noted in the soils effects discussion, a large wild fire were to occur as a result of increasing vegetation densities, tree mortality and consequent increase in hazard.

2) Alternative 2: Proposed Action

As noted in the soils and water discussion, the proposed changes to the mining ditch water diversion would improve instream flows and reduce current levels of sedimentation. These water flow and quality improvement have the potential to contribute to an improvement in fisheries habitat quality in the lower stream reaches.

Sediment delivery from existing roads will be decreased by regrading roads, maintenance and renovation and decommissioning. A short term negligible and localized increase of sediment may occur. This would not result in adverse effects on fisheries downstream. In the long term there will be a reduction of sediment as a result of the proposed road treatments and ripping of compacted skid roads. The planned road

maintenance and renovation will thus protect salmon and trout populations and habitat. The road work will also have an overall positive effect on water quality and will moderate peak runoff. The proposed actions would not contribute anything to the cumulative effects in the fish bearing streams or at the fifth field watershed.

Chapter 4

Agencies and Persons Consulted

A. Public Involvement

All public input was considered by the planning and ID teams in developing the project proposal and in preparing this EA. As part of the initial scoping process, all adjacent landowners within ¼ mile were contacted for comments via letter, as well as all persons and groups who asked to be contacted regarding projects of this sort or in this area. Several letters, an office visit by a local resident seeking information, and one phone call were received.

Later in the scoping process, telephone contacts were made with the individuals who were involved in the 1991 placement of sign commemorating the women who planted trees in the project area. This lead to additional scoping letters being sent to local residents.

B. Agencies Consulted

The Oregon State Department of Fish and Wildlife were advised of the proposed action, and comment invited.

C. Availability of Document and Comment Procedures

This EA will be available for formal public review and comment for 30 days after the announcement of the EA's availability appears in the Grants Pass Daily Courier newspaper. A copies will be available upon on th Medford District's web site and upon request. Written comments should be sent to the Grants Pass Resource Area Field Manager, Grants Pass Resource Area, 3040 Biddle Road, Medford, OR 97504.

Appendix A

Issues and Alternatives Considered but Eliminated

1. Issue: Local residents would like to have better access to the project area's traditionally used resources (e.g., firewood, hunting areas, timber).

Decisions regarding road access to the project area have previously been made and are outside the scope of the present project. The BLM also has a Transportation Management Objectives planning process by which roads and road access are reviewed. Thus this issue was not incorporated in the Peavine project plan. Opportunities for the purchase of various commodities will be made available to the general public where possible as the project evolves.

2. Alternative: Use of Mechanical Harvester

The use of mechanical harvesting systems on this project was considered but eliminated because:

- The project is designed to comply in the strictest sense with the recommendations of the LSRA, which does not recommend use of mechanical harvesters.
- The project has designed to attract local operators, who would be unlikely to have this equipment.

3. Alternative: Potential treatments in units / stands where it was subsequently determined that treatments should not be pursued at this time.

Within the project area all stands were reviewed to assess the potential benefits of thinning treatments. In some areas, "no treatment" was specifically proposed as these sites contain suitable spotted owl habitat or the stands would not benefit from thinning at this time. Additionally, there are several areas were purposely left untreated for the following reasons (See Map 2):

- they are areas of legacy trees,
- slopes are over 70%,
- within riparian reserves,
- are currently suitable Northern Spotted Owl roosting habitat (Section 27, unit 006),
- The eastern half of O.I. unit 007 in section 27 is primarily a serpentine outcrop, and is occupied by Knobcone pine trees,
- The eastern third of O.I. unit 011 in section 27 contains legacy trees and a residence,
- The southeast third of O.I. unit 003 in section 34 is suitable Northern Spotted Owl nesting habitat in its current condition.

Appendix B

Potential Monitoring

1. Stand monitoring could be scheduled at 5-year intervals for 20 years to evaluate if the treatments have resulted in promoting the desired future conditions outlined in the LSRA and treatment objectives in Appendix D. Measured stand / site attributes would include: tree density, growth rates, species, crown ratios, snag (quantity, size, and decay class); coarse down wood (quantity, size, and decay class); shrub and brush species; fuel loading, canopy cover by layer and type. The data collected should be compared to the desired future conditions stated in the Treatment Development Table to determine if the proposed treatments and project design features have been effective in achieving the desired future conditions.

Appendix C

Peavine Project Treatment Objectives Development Table

FEATURES AND CONDITIONS						
FEATURE	PRESENT CONDITION	PROPOSED ACTION	DESIRED CONDITION- 5 YEARS	DESIRED CONDITION- 20 YEARS	DESIRED CONDITION- 50 YEARS	SOURCES *See list below
Young, even-aged tree plantations	Average 400 TPA in even-aged stands with an offsite ponderosa pine component, growth and vigor declining	Thin to 80-225 TPA, remove off-site ponderosa pine, canopy gaps created (1/4 ac per 5 ac) for understory trees to develop, 3-10% of area maintained (<i>e.g. not</i> managed) for structural diversity, maintain species diversity through leave tree preferences.	80-225 TPA. Few or no off-site pine, canopy gaps created in 3-10% of area for understory trees to develop, 3-10% of area unthinned for structural diversity, species diversity maintained.	Option to thin when stands reach 0.6 SDI (at which point competition-related mortality begins), 3-10% of area in small openings have forbs and grasses growing, understory trees developing, structural and species diversity maintained	Canopy gaps with natural regeneration, two and three canopy layered stands with varied growth rates, and species diversity	A* pg 129, 135-143 B* pg 32-33, 36, 72, 181, 185, 195 D* pg 8, B-1, B-5-7, C-11-13 H* pg 4 F*, G*, J*
Large trees, minor species	Some patches of residual old-growth trees, large pines dying out	Residual patches of old-growth retained, species diversity maintained through leave tree preferences, retain all trees greater than 20" DBH	Patches of old-growth and individual large trees, tree health improved through density reduction, species diverse and suitable to each areas' plant association	Patches of old-growth and individual large trees, 10-year growth rate >15/20ths inch in conifers, large crowns and limbs developed, species diverse and suitable to each areas' plant association	Large trees in various conditions, conifer 10-year growth rate is >15/20th inch, diverse species present	A* pg 128, 135 D* pg B-5-7 H* pg 8 J*
Snags	Less than 1 per acre	Retain all snags, retain all trees 20" dbh and greater, as well as residual old-growth patches for recruitment; off-site ponderosa pine >20"dbh used for recruitment trees, up to 4 trees >14" dbh per acre girdled for hard snags where possible	3 - 4 hard snags per acre at least 14" dbh (averaged over 40 acres), off-site pines of poor vigor starting to die and enter snag cycle	4 per acre >24" dbh decay class 2 & 3 (averaged over 40 acres)	At least 4-5 per acre >24" dbh, decay class 2 & 3 (averaged over 40 acres)	A* pg 128, 138-9 B* pg 40 H* pg 4, 5 J*
Down wood	Less than 2 pieces per acre (one piece being 20" x 20')	Keep all existing down wood, cull and sound-- up to 20 pieces per acre, 10 cut logs of 20" diameter in decay class 1 left for coarse down wood per acre, where possible (recruited from thinned material)	Several pieces existing down wood, decay class 1-2 --up to 20 pieces per acre, off-site pines of poor vigor starting to die and fall (snag cycle)	Several pieces existing down wood, decay class 2-4 -- at least 15 pieces per acre, up to 8-10% of ground cover	At least 20 pieces of coarse down wood of decay class 3-4 per acre, 8-10% ground cover	A* pg 128, 135, 138-9 B* pg 44 H* pg 2-5

FEATURES AND CONDITIONS						
FEATURE	PRESENT CONDITION	PROPOSED ACTION	DESIRED CONDITION- 5 YEARS	DESIRED CONDITION- 20 YEARS	DESIRED CONDITION- 50 YEARS	SOURCES *See list below
Streams and stream channels	Headwater streams have step-pool assemblage. Normal hydrological flow altered and high sedimentation rates due to mining and road construction. High embeddeness in spots. Little CWD recruitment in some streams	Maintain physical integrity as a step-pool assemblage. Restore natural hydrological flow to channels interrupted by mining ditches and roads where possible, restore sediment regime by improving and/or repairing existing roads. Restore spatial integrity of headwater tributaries. Increase tree growth and health by density management thinning of stands, thus increasing CWD recruitment in Class V stream reaches. Maintain buffer on Class III and IV streams to allow trees to grow and thus increase recruitment.	Maintain physical integrity as a step-pool assemblage. Improved sediment regime (<30% embeddedness). Restored spatial integrity of headwater tributaries. Increased CWD recruitment and improved upstream processes such as transportation of large woody material starting to occur. Canopy layers increasing, thereby decreasing solar radiation reaching stream channel, maintaining cooler water temps (58° F maximum temperature per week during heat of summer)	Recommended riparian treatments begun. Maintain physical integrity as step-pool assemblage. Natural hydrology restored where possible, maintain sediment regime (<30% embeddedness). Maintain spatial integrity of headwater tributaries. Canopy layers increased, less solar radiation reaching stream channel, maintaining cool water temperatures (58°F maximum temperature per week during heat of summer) Large wood of various decay classes moving into headwater reaches of stream channels.	Maintain physical integrity as step-pool assemblage. Maintain sediment regime (<30% embeddedness). Canopy cover at levels expected for late successional forests, maintaining cool water temperatures (58°F maximum temperature per week during heat of summer) Natural hydrological processes occurring, large woody material moving more naturally into stream system. Maintain spatial integrity of headwater tributaries.	A* pg 139-140 B* pg 22-3, 26-7, 41-3, 175 D* pg B-9-11, B-30, C-30-33 I*
Springs	Surveyed, located, and mapped	Maintained with 170' buffers	Intact springs	Intact springs	Intact springs	B* pg 22, 26-7
Wallow/ Meadow	Wet season ponding, encroachment by planted trees <i>1940 photo not available for this site</i>	Remove planted off-site pines, leave big open-grown Doug-fir naturals, underburn to reduce brush and conifer seedling	Wallow remains open	Wallow intact and being used, encroaching tree and shrub vegetation being browsed	Wallow intact and being used, encroaching tree and shrub vegetation being browsed	A* pg 143
Fuels	Moderate-to-high risk	Reduce dangerous fuel loadings created from slash in density management, decrease hazard and provide a defensible zone along roads used for recreation by pruning live trees 25' upslope and 50' downslope from edge of road	Low-to-moderate risk of stand replacing fire event	Low-to-moderate risk of stand replacing fire event	Low-to-moderate risk of stand replacing fire event	A* pg 137 B* pg 35, 90, 172 D* pg B-7-8

FEATURES AND CONDITIONS						
FEATURE	PRESENT CONDITION	PROPOSED ACTION	DESIRED CONDITION- 5 YEARS	DESIRED CONDITION- 20 YEARS	DESIRED CONDITION- 50 YEARS	SOURCES *See list below
Historical Sites: 1=Old cabin 2=Stamp mill (Arastra) 3=Cabin in 27-005 4=Women's planted trees & sign 5=Old mining ditches	1, 2, 3, 5 = Assessed for importance 4 = Planters and interested parties notified of project in area	1, 2, 3 = No operations allowed on sites, protected by directional felling 4 = Sign left in place 5 = Restore natural hydrological functions Maintain integrity of ditches where not treated to restore flows.	1, 2, 3, 4 Intact 5 = Natural hydrological functions improved	1, 2, 3, 4 = Intact as far natural deterioration allows 5 = Natural hydrological functions restored	1, 2, 3, 4 = Natural deterioration occurring 5 = Natural hydrological function continues	A* pg 139-140 B* pg 22-3, 26-7, D* pg B-30
Northern Spotted Owl	Survey for populations and suitable habitat Suitable roosting habitat found in 27-006, suitable nesting habitat found in 34-003	No treatment recommended for suitable roosting and nesting habitat areas Improve habitat potential through density management as proposed in this project, which includes maintenance or improvement of habitat for prey-base species like woodrats and flying squirrels	As suitable habitat develops and prey-base populations increase or remain healthy, the owl population will increase and move into the treated stands	As suitable habitat develops and prey-base populations increase or remain healthy, the owl population increases and move into the treated stands	Late successional characteristic forest in treatment area will provide suitable habitat for a healthy, reproducing owl population	A* pg 62, 64, 131 B* pg 55
Del Norte Salamander	Present in small areas mostly in Section 27	Protect inhabited sites with recommended buffers, no treatment within buffers	Populations intact	Populations intact	Populations intact	A* pg 65 B* pg 45
Elk and deer habitat	Big game management area	Preferred browse tree and shrub species protected from cutting, canopy gaps created (1/4 ac per 5 ac) allowing forage vegetation to develop, 3-10% of area <i>not</i> managed to retain hiding cover, ripped landings and spur roads seeded and/or planted with palatable native grasses and shrubs, road density kept to recommended levels	Browse species plant populations increasing, hiding cover intact, road density kept to recommended levels	Deer and elk populations intact or increasing, stands provide good browse and cover	Deer and elk populations intact or increasing, stands provide good browse and cover	A* pg 143 B* pg J*
Protected Plants	<i>Cypripedium</i> and <i>Sophora</i> in sec 34 <i>Bondarzewia</i> in 34	Protect with buffers as per species protocol so populations remain intact	Populations are intact	Populations are intact, reproducing	Populations are intact, reproducing	A* pg 136-7 B* pg 40, 53-54

FEATURES AND CONDITIONS						
FEATURE	PRESENT CONDITION	PROPOSED ACTION	DESIRED CONDITION- 5 YEARS	DESIRED CONDITION- 20 YEARS	DESIRED CONDITION- 50 YEARS	SOURCES *See list below
Soils	Areas of soil compaction. Road fill failure. Erosion areas by roads. Unique soil types	Compacted areas ripped and seeded with native vegetation, monitoring established Road failures repaired and stabilized. Erosion areas stabilized, proposed monitoring established. Serpentine outcrop in section 27 protected by no treatment area	Vegetation establishing in compacted areas Erosion areas stable Monitoring continues Unique soils have appropriate plant species growing, fire processes are restored to plant cycles, nutrient deficient soils	Compacted areas are restored to forest land, vegetation taking hold. Erosion areas stable Unique soils support species natural to them, natural fire cycles allowed	Ripped and seeded areas have become part of the layering typical of a late-successional forest. Natural erosion may occur Unique soils support species natural to them, natural fire cycles allowed.	B* pg 48, 155-6, 162-3 D* pg C-33, E-1-8
Port-Orford Cedar	Individual plants identified in east half of section 34	Protect road system from infestation during operations, do not cut any POC, establish wash station	Trees remain uninfested, continue to grow	Trees remain uninfested, continue to grow	Trees remain uninfested, continue to grow and reproduce	A* pg 140, 142 B* pg 75, 175 E* pg 4,9,17, 23-4
Roads	Several damage sites due to fill-failures, slides, ravelling, erosion (see Table 2, Appendix A) Assess density	Do not build any new roads Repair damaged areas. Maintain at density levels recommended for elk management areas (1.5 mi/sqmi), maintain to reduce erosion, sedimentation, and reduce spreading of <i>P. lateralis</i>	No new road construction Existing roads maintained in good condition, erosion and sedimentation minimal	No new road construction. Existing roads maintained in good condition, erosion and sedimentation minimal.	Trees remain uninfested, continue to grow and reproduce	A* pg 140, 142 B* pg 75, 175 E* pg 4,9,17, 23-4

* INFORMATION SOURCES:

A = Southwest Oregon Late-Successional Reserve Assessment 10/95

B = Medford District Record of Decision and Resource Management Plan 6/95

C = Final EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl 2/94

D = Record of Decision for amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl, Standard and Guidelines for Management of Habitat for Late-Successional and Old-growth Forest Related Species Within the Range of the Northern Spotted Owl 4/94

E = USDI BLM. Port-Orford Cedar Management Guidelines 9/94

F = Density, ages, and growth rates in old-growth and young-growth forests in coastal Oregon J. Tappeiner, et al F.R.L. #3166 Oregon State University 1996

G = Comparison of Tree Development Patterns Among Late-Successional and Early-Successional Douglas-fir Forest Stands in the Siskiyou Mountains T. Sensenig

H = USDI IMB # OR-96-310/REO Memorandum July 9, 1996 Criteria to Exempt Specific Silvicultural Activities in Late-Successional Reserves and Managed Late-Successional Stands from Regional Ecosystem Office Review

I = USDI IMB # OR-95-123 7/95 Watershed Analysis for Management Activities in Riparian Reserves

J = Effects of Thinning on Structural Development in 40-to 100-year-old Douglas-fir Stands in Western Oregon. Bailey, Tappeiner O.S.U. Paper 3207 1997